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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,724	01/08/2002	Scott Lang	8364/85922	5230

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PATENT SERVICES GROUP
HONEYWELL INTERNATIONAL, INC.
101 COLUMBIA ROAD
MORRISTOWN, NJ 07962

EXAMINER

DEJESUS, LYDIA M

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,724

Applicant(s)

LANG ET AL.

Examiner

Lydia M. De Jesús

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. The restriction requirement presented in the previous Office action is hereby repeated and thus made FINAL.
2. Applicant's election of Group I, corresponding to claims 1-11 and 13-25, in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Information Disclosure Statement

3. The information disclosure statement filed April 9, 2002 has been placed of record and the references cited therein have been considered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 5-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is rejected due to the limitation "wherein an electrical signal coupled from the sensor to the control circuit is indicative of one of a test output and an alignment check output" because the claim language fails to clearly set forth which structural elements are involved in the alignment check.

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Claims 6-9 are rejected due to their dependence on claim 5.

Claim 10 is rejected due to the limitation “conducting an alignment test” because the claim language fails to state which structural elements are involved in the alignment test.

Claim 11 is rejected due to its dependence on claim 10.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(d) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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7. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Nawracala [US Patent Application Publication 2002/0180974 A1].

Nawracala discloses a test apparatus for a projected beam type detector comprising: a control circuit, shown in Figure 4 (see paragraphs 22 and 23), which can be coupled to the detector [8,9]; an electrically controllable obscuration member [116] which has at least first and second states, coupled to the control circuit, wherein the control circuit includes circuitry [115] to test the detector by switching the obscuration member from a first state to the second state to alter a beam transmission characteristic i.e., angle of incidence on the sample, whereupon an output, indicative of the second state, is coupled to the control circuit.

Said test apparatus includes an apparatus to alter the beam characteristic by moving the obscuration member into a beam path of the detector. The test apparatus also includes a beam source [1] inherently having a drive circuit coupled thereto wherein the drive circuit couples the same power level to the source during both normal monitoring operation and during at least one test.

8. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartmann [US Patent 4,126,396].

Hartmann discloses a test apparatus for a projected beam type detector comprising: a control circuit [28] which can be coupled to the detector [17]; an electrically controllable obscuration member [73, 18] which has at least first and second states, coupled to the control circuit, wherein the control circuit includes circuitry to test the detector [17] by switching the obscuration member from a first state to the second state to alter a beam transmission characteristic whereupon an output, indicative of the second state, is coupled to the control

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circuit. The test apparatus includes an apparatus to alter the beam characteristic by at least one of, moving the obscuration member [73] into a beam path of the detector, or, altering an optical transmissive characteristic of the member i.e., selected wavelength passing by the member [18]. The apparatus includes a beam source [16] and a drive circuit [70] coupled thereto wherein the drive circuit couples the same power level to the source during both normal monitoring operation and during at least one test.

The test apparatus further includes an output port [1,2,3,...,7], coupled to the control circuit for transmitting indicia indicative of a test result to a remote location [69].

9. Claims 5, 6, 8 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartmann.

Hartmann discloses a projected beam detector comprising: a beam source [16], and a beam sensor [17] configured to project a radiant energy beam on a path therebetween through at least part of a region being monitored; a controllable obscuration member [73 and 18] (see lines 57 of column 6 through line 10 of column 7), wherein the member [73] has an obscuration state and a non-obscuration state; a control circuit [28] coupled to the source, the sensor, and the member and including circuits [70,80] to switch the member from a non-obscuration state to an obscuration state whereby an electrical signal coupled from the sensor to the control circuit is indicative of a test output. Said obscuration member is movable between the states by a transducer [80].

The transducer comprises an electrically driven source of rotary motion, as shown in Figure 1 (see lines 62-63 of column 6).

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With respect to claims 10-11: The method steps recited in claim 10 with respect to conducting an operational test will be performed during the normal operation of the test apparatus disclosed by Hartmann. Hartmann further discloses maintaining a record of test results, and repeating the steps at least intermittently (see lines 56-64 of column 3).

10. Claims 13-14, 17, 18 and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartmann.

Hartmann discloses a projected beam detector comprising: a beam sensor [17] and a beam source [16] configured to project a radiant energy beam on a path therebetween through at least part of a region [49] being monitored; a controllable obscuration member [73, 18], wherein the member [18] has at least two obscuration states, and a control circuit [28] coupled to the source, the sensor, and the member and including circuits [70,80] to switch the member from a first state, indicative of a normal condition, to at least a second state indicative of at least one test condition whereby an electrical signal is coupled from the sensor to the control circuit and is indicative of one of a normal output or a test output.

The detector includes a reflector [77] wherein the radiant energy beam from the source is deflected to the sensor by the reflector.

It is considered that the control circuit inherently includes circuitry to switch the member [73] between an obscuration state, indicative of at least one test condition and a different state indicative of a normal operational condition and inherently inhibits generation of an output signal indicative of a normal operating condition when the member [73] is in a state indicative of a test condition (see lines 64-68 of column 6 and lines 62-68 of column 12).

The sensor [17] and the source [16] are carried in a common housing [16]. The detector further includes a separate reflector [12].

11. Claims 5, 7, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwartz et al. [US Patent 5,416,575, hereinafter Schwartz].

Schwartz discloses a projected beam detector comprising: a beam source [14], and a beam sensor [16] configured to project a radiant energy beam on a path [18] therebetween through at least part of a region being monitored; a controllable obscuration member [20/58], wherein the member has an obscuration state and a non-obscuration state; a control circuit [24/50] coupled to the source, the sensor, and the member and including circuits to switch the member from a non-obscuration state to an obscuration state whereby an electrical signal coupled from the sensor to the control circuit is indicative of a test output.

The obscuration member, in this case for example a Graphic LCD module [58], is electrically switchable between states thereby exhibiting an optically transmissive condition, relative to the beam, or a less optically transmissive condition, relative to the beam while at the common beam impinging location. The obscuration member i.e., Graphic LCD module [58], comprises an element having an electrically alterable transmission characteristic wherein in response to a control electrical signal, the transmission characteristic switches from the optically transmissive condition to the less optically transmissive condition.

With respect to claim 10: The method steps recited in said claim with respect to conducting an operational test will be performed during the normal operation of the detector disclosed by Schwartz.

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12. Claims 13, 16, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwartz.

Schwartz discloses a projected beam detector comprising: a beam sensor [16] and a beam source [14] configured to project a radiant energy beam on a path [18] therebetween through at least part of a region being monitored; a controllable obscuration member [Graphic LCD module 58], wherein the member has at least two obscuration states, and a control circuit [50] coupled to the source, the sensor, and the member and including circuits to switch the member from a first state, indicative of a normal condition, to at least a second state indicative of at least one test condition whereby an electrical signal is coupled from the sensor to the control circuit and is indicative of one of a normal output or a test output.

The states of the obscuration member are selected from a class which includes a non-obscuration state, a partial obscuration state, and a total obscuration state as shown in Figure 8. The states of the obscuration member also include one state comprising one of uniform obscuration by the member and non-uniform obscuration by the member and a second state comprises the other of uniform obscuration by the member and non-uniform obscuration by the member (see line 49 of column 7 through line 3 in column 8).

13. Claims 13, 15, 19, 20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Galvin et al. [US Patent 4,749,871, hereinafter Galvin].

Galvin discloses a projected beam detector comprising: a beam sensor [162] in a displaceable receiver portion [116] and a beam source [152] in a transmitter portion [114] configured to project a radiant energy beam on a path therebetween through at least part of a region being monitored; a controllable obscuration member [164], wherein the member has at

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least two obscuration states, and a control circuit [112] coupled to the source, the sensor, and the member and including circuits to switch the member from a first state, indicative of a normal condition, to at least a second state indicative of at least one test condition whereby an electrical signal is coupled from the sensor to the control circuit and is indicative of one of a normal output or a test output.

The test output signal is selected from a class which includes an alarm condition (see lines 59-67 of column 7) and includes circuitry to establish a fault condition if the output indicative of a test condition is not within predetermined first and second limits.

As shown in Figure 1 the detector includes a transmitter portion [14] and a displaceable receiver portion [16] wherein the transmitter portion includes the source [152] and circuitry to project a beam to the receiver portion, as shown in Figure 9. The receiver portion includes the sensor [162] for responding to a beam from the transmitter portion, as shown in Figure 10.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Malinowski discloses a smoke detector with test means for simulating a predetermined percentage of smoke. Crowley discloses a portable smoke measuring device. Friedl discloses a method for measuring the optical transmission characteristics of transparent and translucent media and optical diffractometer for carrying out this method. Tulip discloses a gas detector with a reference cell.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lydia M. De Jesús whose telephone number is (703) 306-5982. The examiner can normally be reached on 12:30 to 8:00 p.m., Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (703) 308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

LDJ
March 24, 2003



Diego F.F. Gutierrez
Supervisory Patent Examiner
Technology Center 2800